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## INDUSTRIAL DISEASES IN AMERICA

FREDERICK L. HOFFMAN

The actual and relative extent of industrial diseases in America can not be stated with even approximate accuracy at the present time. Our system of factory inspection is inadequate and woefully lacking in the required medical assistants, who alone can provide the necessary technical ability for qualified inquiry into the actual conditions of health and life in modern industry. The annual reports of our state factory inspectors contain very little useful information, and they are in this respect in marked contrast to the annual reports on factory inspection in England, Germany, France, Austria, Belgium, etc. There can be no really useful system of factory inspection without the assistance of medical inspectors, including women medical inspectors, as is the case in the United Kingdom. The value of medical assistance in factory inspection, and most of all in special inquiries to determine industrial processes injurious to health, is no longer open to discussion. The many valuable and far-reaching reports which have been made by the factory inspection service of the United Kingdom, and by special departmental committees and royal commissions, emphasize the corresponding necessity of qualified investigations in this country. Mention may be made in this connection of a recently published report of a departmental committee appointed to inquire into the dangers attendant on the use of lead and the danger of injury to health arising from dust and other causes in the manufacture of earthenware and china, and in the processes incidental thereto, including the making of lithographic transfers. The disclosures of this investigation are of peculiar application to American industry, but we have no means at present of making an equally thorough investigation into the conditions as they exist in the centers of our pottery manufacture. Equally suggestive and important is the special report of a home office committee on dangerous or injurious processes in the smelting of materials containing lead, and the manufacture of lead, orange red, and flaked litharge, which brings out the extent of lead poisoning in the various industries manufacturing or using lead, including processes in zinc smelting and observations on remedial measures, supplemented by rational recommendations for rules in conformity to German and French regulations.

Mention may also be made of a special report on dangerous or injurious processes in the coating of metal with lead or a

mixture of lead and tin, the results of which apply to a number of American industries employing many wage earners more or less exposed to conditions detrimental to life. Finally, reference may be made to the report of a departmental committee on humidity and ventilation in weaving sheds, the conclusions of which apply to a large proportion of our textile industries, in which the conditions are far from satisfactory. We therefore need in this country, in every state, a thoroughly equipped factory inspection service, including medical assistants trained in the principles and practice of industrial hygiene, and other experts qualified to investigate and report upon the numerous elements which enter into the whole question of rational health conditions in industry.

A committee appointed by the First National Conference on Industrial Diseases, to wait upon the President and present to him a memorial suggesting the appointment of a national commission on industrial diseases, has presented a thoroughly digested report in support of their recommendation that the whole subject of industrial diseases be made a matter of national concern. The committee laid stress upon the inadequacy of the existing state of information concerning health in industry, and their suggestions were largely in conformity to the admirable plan of inquiry adopted by the Illinois State Commission on Industrial Diseases. It is sincerely to be hoped that the President will see his way clear to give his endorsement to the proposed investigation, and that the memorial will be sent to Congress and printed as a public document for the information of the people.

The subject of industrial diseases is certain to attract more general attention in the future, on account of the countrywide demand for adequate workmen's compensation in the event of industrial accidents. Industrial diseases in many cases shade imperceptibly into industrial accidents, and the workmen's compensation legislation of England comprehends a large number of occupation diseases within the scope of the workmen's compensation law. On this ground alone a national inquiry would be of great practical value and would establish the actual extent of harmful industrial processes as they afflict a considerable proportion of our wage earners at the present time. It is hardly necessary on this occasion to emphasize the importance of industrial dust as a factor detrimental to health and life in industry, and the great practical importance of feasible methods of factory ventilation, dust removal, humidification, etc.

Industrial processes are often injurious not only to the health of the people employed therein, but occasionally to the surrounding population, and the vegetation of the near-by country within a radius of several miles. The practical aspects of this point are emphasized in the pending litigation against a number of large smelters, the fumes of which have been of serious consequence to the surrounding country, including national forest reserves, etc.; and a number of very important and useful contributions have been made on the effect of smelter smoke, by the scientific bureaus of the Department of Agriculture. In this respect, as in many others, the disease-producing factors in industry are of public interest, aside from their more immediate effect upon the health of a particular class of employees.

There is urgent need for a qualified expression of medical and other opinion upon the relations of industrial processes to the health of children and young persons. Obviously many trades are decidedly unsuitable for those who engage therein, on account of defective physique, eyesight, hearing, etc.; and the employment of all children and young persons in industry should be made subject to medical supervision and control. A brief treatise should be prepared by a competent committee to emphasize in the case of each particular trade or occupation the required physical capacity and endurance, the proper age at entry, and the processes injurious to health which are more or less likely to hinder bodily growth and future industrial capacity. A word of warning would often be sufficient to prevent young persons who are unsuitable for particular trades from engaging therein to the probably serious detriment to their health, and the practical certainty of early invalidity and premature death.

Another important question which demands consideration is the inadequacy of medical certification of deaths, which often fails to disclose the true cause of death or important contributory circumstances, that, for purposes of public health administration, are required to be known. The secondary symptoms are very often of greater public importance than the immediate cause of death; and particularly is this true of diseases complicated by the slow absorption of lead, mercury, etc., by the human system. Medical practitioners require to better understand, and they should attach greater importance to the symptomatology of industrial diseases, particularly to lead poisoning in potteries, glass-works, white lead manufacture, house painting, etc. This is

equally true of tuberculosis caused or complicated by industrial dust, which very often assumes the true character of fibroid phthisis or industrial lung disease, requiring to be specifically reported as such and separate and distinct from general tuberculosis of the lungs. The annual reports of boards of health should contain a brief statement of the facts concerning industrial diseases, so that the local experience in particular trades may be utilized in the further development of the science and art of industrial hygiene.

But what is needed most urgently is the establishment of a *national institute of industrial hygiene* on a broad foundation, corresponding in character and extent to the research funds established by far-seeing philanthropy in behalf of other causes. Surely there can be no better investment of five or ten million dollars than in the establishment of a national institute adequately equipped for research work, including the treatment of the more severe and obscure forms of trade diseases in special clinics similar to the far-famed institution at Milan. Such an institute could carry out the work proposed for a national commission on industrial diseases, and by publishing the results of qualified research work would contribute immeasurably to the improvement of the conditions under which the industrial activity of the nation is carried on. Surely there can be no branch of scientific research in geology, botany, astronomy, physics, chemistry, etc., of more urgent necessity and of greater practical utility than research work to determine the causes, the methods of prevention, and the cure of industrial diseases. There is little enough material reward in the pursuit of industrial medicine as a distinct profession, but a national institute for the study of industrial diseases would give the required encouragement and place the whole subject upon a broad and permanent national foundation.

In addition to the foregoing there is need of a national welfare institute for the improvement of labor conditions, including a national museum of safety devices, of which the New York institution is the nucleus, and of which the Berlin institution is the ideal. Surely a national museum of specimens, of zoölogy, or of relics of antiquity can not compare in importance or utility with a museum of safety devices, whereby the calamities of industrial life are lessened and the ravages of industrial diseases are diminished. Surely what the generosity of the German government and

German philanthropy have brought about is equally possible of attainment in the United States.

In conclusion, then, the plea is—first, for the appointment of a national commission to investigate and report upon the whole subject of industrial diseases; second, for the foundation of a national institute of industrial diseases upon the broadest plane of a liberal philanthropy, corresponding to the great foundations of generous minded givers in other fields; third, for the establishment of a national institute for the improvement of labor conditions, including a thoroughly equipped museum of safety devices. It would perhaps be difficult to comprehend a more ambitious program in a few words, but where the issue at stake is the well-being of the wage-earning masses, who by their toil contribute so largely to the sum and substance of our national wealth, the object to be attained is well worth the required effort, and it is to be hoped that through persistent agitation on the part of the American Association for Labor Legislation these hopes and plans will be realized at a not far distant day.